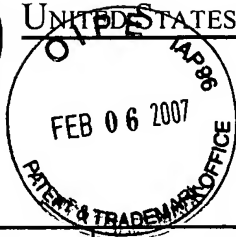




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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,286	03/04/2004	Colin N.B. Cook	2540-0707	3146

7590 02/01/2007
Davidson Berquist Jackson & Gowdy LLP
4501 North Fairfax Drive, Suite 920
Arlington, VA 22203

EXAMINER

DISTEFANO, GREGORY A

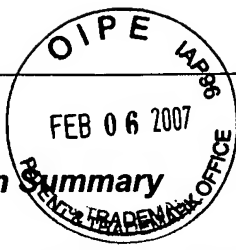
ART UNIT	PAPER NUMBER
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2109

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



Office Action Summary

Application No.

10/792,286

Applicant(s)

COOK ET AL.

Examiner

Gregory A. DiStefano

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Application filed 4/03/2003.
2. Claims 1-11 have been presented for examination.

Specification

3. The disclosure is objected to because of the following informalities:

on pg 2, paragraph [006] the statement "existing local are network" is assumed to mean "existing local area network";

on pg 6, paragraph [0019] the statement "VPC 208 captures the hardware outputs of the host and encodes them for transmission to the VPS." This statement does not translate onto the drawing of Fig. 2 as host 202 is the only "host" shown and is not directly connected to VPC 208. The examiner translates this to mean the VPC 208 captures output from a totally separate host, which is not shown in the drawing.

Appropriate correction is required.

Claim Objections

4. Claim 11 is objected to because of the following informalities: Claim 11 is dependent on Claim 6 which does not contain the limitation of "the VPS" as recited in Claim 11. The examiner interprets the intended dependency of Claim 11 to be Claim 9 and is treated as such for purposes of examination.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication Number 2002/0038334 A1, Schneider et al., hereinafter Schneider.

7. As per Claim 1, Schneider teaches the following:

utilizing universal serial bus (USB) protocol to provide movement of a mouse cursor on a host computer to an absolute position, (pg 3, paragraph [0031]), i.e. the keyboard and mouse are merged into a single interface (e.g., USB or Macintosh-style), (pg 9, paragraph [0087]), i.e. the controlling computer 12 generates a pseudo-cursor (e.g., a set of cross-hairs) that indicates where the digitized cursor should be. The examiner interprets that the "pseudo-cursor" is generated at the current position of the hosts mouse cursor and that this location is an "absolute position";

synchronizing the position of a logical mouse and the position of an actual mouse using the absolute position information, (pg 9, paragraph [0087]), i.e. by sending to the target computer a series of mouse commands, it is possible to drive the cursor to the upper left hand-corner (the 0,0 corner), no matter where the cursor was prior to the

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series of commands. The original cursor is then forced back down to be aligned with the cross-hairs.

8. Regarding Claim 2, Schneider teaches the method of Claim 1 as described above. Schneider further teaches:

a virtual presence client (VPC) (i.e. analyzing digitizer control application) calculates said logical mouse position, (pg 9, paragraph [0087]), i.e. the digitizer control application 220(or the analyzing digitizer control application 240) sets the cursor of the target computer to a known location.

9. Regarding Claim 3, Schneider teaches the method of Claim 1 as described above. Schneider further teaches:

the operating system of the logical mouse is tested to determine if it supports(i.e. basic system testing) the use of different human interface descriptors(HIDs), (pg 7, paragraph [0072]), i.e. that microprocessor performs: (1) basic system testing (e.g., code checking, FPGA checking, and RAM testing), (2) transferring mouse and keyboard signals.

10. Regarding Claim 4, Schneider teaches the method of Claim 3 as described above. Schneider further teaches:

the HIDs are USB compatible, (pg 3, paragraph [0031]), i.e. the keyboard and

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mouse are merged into a single interface (e.g., USB or Macintosh-style). The examiner interprets the term "HID" to mean the user clicking on a mouse button where said mouse uses a USB interface.

11. As per Claim 5, Schneider teaches the following:

generating a signal utilizing human interface descriptors (HIDs) at a remote computer, (pg 2, paragraph [0025]), i.e. in general, the system of the present invention transmits a GDI representation of digitized video signals as well as mouse and keyboard signals over a communications link;

the HIDs including a plurality of user-operated devices which may support moving a pointer at a local computer to an absolute position in order to synchronize a local mouse with a remote mouse, (pg 9, paragraph [0087]), i.e. by sending to the target computer a series of mouse commands, it is possible to drive the cursor to the upper left hand-corner (the 0,0 corner), no matter where the cursor was prior to the series of commands. The original cursor is then forced back down to be aligned with the cross-hairs.

12. Regarding Claim 6, Schneider teaches the method of Claim 5 as described above. Schneider further teaches:

a PC tablet(i.e. FGPA) is used to provide the HIDs, (pg 2, paragraph [0025]), i.e.

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the present invention transmits a GDI representation of digitized video signals as well as mouse and keyboard signals. The examiner interprets the term PC tablet to be a graphical device interface the user may alter using a HID(i.e. mouse or keyboard).

13. As per Claim 9, Schneider teaches the following:

A virtual presence server (VPS)(Fig 1A, 12), (pg 9, paragraph [0087]), i.e. the controlling computer 12 generates a pseudo-cursor;

A virtual presence client (VPC)(Fig 3b, 220) communicating with the host, said VPC receiving absolute mouse coordinates without operator intervention, (pg 9, paragraph [0088]), i.e. as the mouse commands are received by the digitizer control application 220 (or the analyzing digitizer control application 240), they are processed and passed on to the target device (which updates its local cursor).

14. Regarding Claim 10, Schneider teaches the architecture of Claim 9 as described above. Schneider further teaches:

one or more human interface descriptors (HIDs) are used in conjunction with a universal serial bus (USB) interface to provide said absolute mouse coordinates(pg 2, paragraph [0025]), i.e. in general, the system of the present invention transmits a GDI representation of digitized video signals as well as mouse and keyboard signals over a communications link, (pg 3, paragraph [0031]), i.e. the keyboard and mouse are merged into a single interface (e.g., USB or Macintosh-style).

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15. Regarding Claim 11, Schneider teaches the architecture of Claim 9 as described above. Schneider further teaches:

the VPS is a PCI card(i.e. PCI FPGA) installed in a PCI slot of the host computer, (pg 2, paragraph [0026]), i.e. the motherboard 104 includes a CPU 106(e.g., Intel 80x86, Motorola 680x0, or PowerPC), memory 108 (e.g., DRAM, ROM, EPROM, EEPROM, SRAM, SDRAM, and Flash RAM), and other optional special purpose logic devices (e.g., ASICs) or configurable logic devices (e.g. GAL and reprogrammable FPGA), (pg 5, paragraph [0054]), i.e. the output is then provided to the Video DSP and PCI FPGAs in order to capture video at the required pixel clock rate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider in view of US Patent Application Publication 2002/0129353 A1, Williams et al., hereinafter Williams.

16. As per Claim 7, Schneider teaches the following:

initializing the USB channel on the host computer with a compatible HID, (pg 2,

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paragraph [0027]), i.e. stored on any one or on a combination of computer readable media, the present invention includes software for controlling both the hardware of the computer 12 and for enabling the computer 12 to interact with a human user. Such software may include, but is not limited to, device drivers;

using such HID over the USB channel to synchronize a remote and local mouse at an absolute position, (pg 9, paragraph [0087]), i.e. by sending to the target computer a series of mouse commands, it is possible to drive the cursor to the upper left hand-corner (the 0,0 corner), no matter where the cursor was prior to the series of commands. The original cursor is then forced back down to be aligned with the cross-hairs.

Schneider does not explicitly teach a method for testing and determining operating systems as described in claim 7. However the method of identifying operating systems and writing device code to accomplish such was well known in the art as taught by Williams. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to modify the operating system determination method of Schneider with the determination method as taught by Williams:

testing a series of operating systems to determine which human interface descriptors (HIDs)(i.e. driver for peripheral) are supported by such operating systems, (claim 12), i.e. the medium that when executed causes a computer to: retrieve a list of potential driver sources; create a driver profile for the new peripheral comprising at least a new peripheral model number; search sources from said list of sources for a driver matching said driver profile; obtain said matching driver. The examiner finds it inherent

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that in order for said "list of potential driver sources" to exist, there must at one point in time have been testing to determine said drivers for said list;

writing a device code on a virtual presence server (VPS) to ask which operating system (OS)(i.e. version of OS) is in use on a host computer housing the VPS, (claim 23), i.e. a computer program product as defined by claim 12 wherein causing the computer to create a driver profile further comprises causing the computer to determine a version and a language for the operating system;

determining which OS is in use on the host computer, (claim 23), i.e. determine a version and a language for the operating system;

One skilled in the art at the time the invention was made would be motivated to modify the operating system detection and compatibility of Schneider with the method taught by Williams because in the past, (pg 1, paragraph [0005]), users are required to correctly make several determinations to choose the proper drive amongst the several available to install. For example, users must accurately determine factors such as what version operating system they are using, what model peripheral they are installing, what feature sets are supported by the peripheral, and the like.

17. As per Claim 8, Schneider teaches the following:

Synchronizing the local and remote host mouse positions using the HIDs, transparently without the need for operator intervention, (pg 9, paragraph [0087]), i.e. by sending to the target computer a series of mouse commands, it is possible to drive the cursor to the upper left hand-corner (the 0,0 corner), no matter where the cursor was

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prior to the series of commands. The original cursor is then forced back down to be aligned with the cross-hairs.

Schneider does not explicitly teach a method for testing the compatibility of different HIDs with an OS as described in claim 8. However the method of testing the compatibility of different devices with different operating systems was well known in the art as taught by Williams. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to modify the compatibility testing method of Schneider with the testing method as taught by Williams:

Trying different human interface descriptors (HIDs)(i.e. driver) to determine which HIDs, work with an operating system (OS) in use, (claim 12), i.e. the medium that when executed causes a computer to: retrieve a list of potential driver sources; create a driver profile for the new peripheral comprising at least a new peripheral model number; search sources from said list of sources for a driver matching said driver profile; obtain said matching driver.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,828,372 discusses another collaboration system where a control terminal may display a pointer on a plurality of display devices as well as creating an indication mark at designated coordinates;

US 5,986,644 discusses a remote control system that can control a PC by

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sending and coordinating the position of the cursor of the display of said PC;

US 6,072,463 discusses a conference communication system where multiple terminals may each display coordinated pointers on one another;

US 7,127,678 B2 discusses detecting an operating system on the host of a USB device and installing appropriate drivers associated with said operating system;

US 2003/0005177 A1 discusses a method of loading hardware devices and detecting operating systems utilizing USB;

JP 05083413 A discusses a method for transmitting and receiving pointing device information between different terminals in real time.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. DiStefano whose telephone number is (571)270-1644. The examiner can normally be reached on 7:30am-5:00pm Mon.-Thurs.

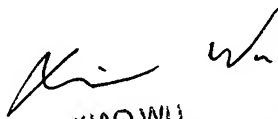
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571)272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

G.A.D.

1/8/2007


XIAO WU
SUPERVISORY PATENT EXAMINER

Notice of References Cited

Application/Control No.

10/792,286

FEB 06 2007

Applicant(s)/Patent Under
Reexamination
COOK ET AL.

Examiner

Gregory A. DiStefano

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Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,828,372	10-1998	Kameda, Masami	715/751
*	B	US-5,986,644	11-1999	Herder et al.	345/158
*	C	US-6,072,463	06-2000	Glaser, Howard Justin	715/753
*	D	US-7,127,678	10-2006	Bhesania et al.	715/744
*	E	US-2002/0038334	03-2002	Schneider et al.	709/203
*	F	US-2002/0129353	09-2002	Williams et al.	717/175
*	G	US-2003/0005177	01-2003	Duran et al.	709/327
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	JP 05083413 A	04-1993	Japan	TANAKA, TOSHIHIDE	
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

(19)日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開平5-83413

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G 0 6 F 3/153	3 3 0 A	9188-5B		

審査請求 未請求 請求項の数1(全 4 頁)

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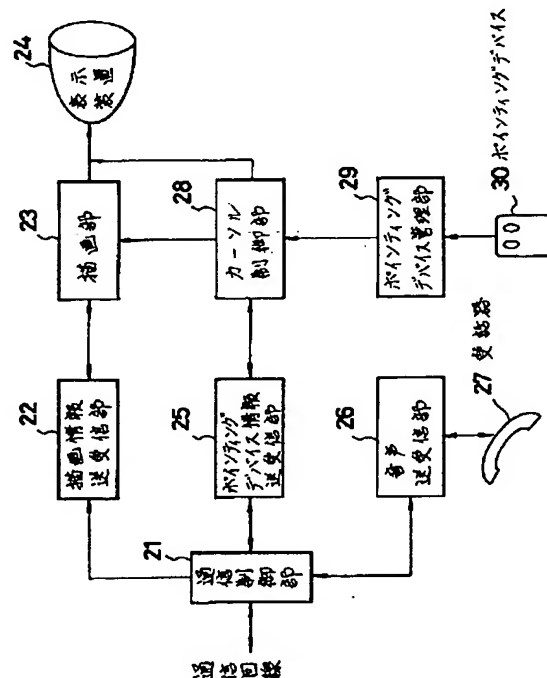
(74)代理人 弁理士 武田 元敏 (外1名)

(54)【発明の名称】 描画通信端末装置

(57)【要約】

【目的】 双方向描画通信の基本機能に加え、画像を破壊せずに指す、なぞる等の非描画意志伝達を可能とする。

【構成】 座標、移動量などのポインティングデバイス情報を端末相互間で送受信する機構と、自らに接続されたポインティングデバイスに追従するカーソルと相手側端末から送信されたポインティングデバイス情報に追従するカーソルを各々独立に表示する機構を具備したものである。



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【特許請求の範囲】

【請求項1】 音声信号を送受信する音声送受信装置と、文字・図形を表示可能な表示装置と、文字・図形の描画情報を送受信する描画情報送受信装置と、ポインティングデバイスおよびポインティングデバイス管理部と、ポインティングデバイスの座標等の情報を送受信するためのポインティングデバイス情報送受信装置と、自らに接続されたポインティングデバイスに追従するカーソルとポインティングデバイス情報送受信装置で受信した情報に追従するカーソルを独立に表示するカーソル制御部と、それぞれのカーソル操作に従い表示装置に対して文字・図形などの描画を行う描画部を有することを特徴とする描画通信端末装置。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、描画通信端末に関するものである。

【0002】

【従来の技術】近年、テレライティングと呼ばれる分野に代表される描画通信が注目されている。これらは音声による通話と同時に文字・図形情報を送受信するものであり、通話者同士が同じ画像をリアルタイムに変更しながら情報交換を行うものである。

【0003】

【発明が解決しようとする課題】しかしながら、上記従来の描画通信は、通話者が画像に対して行える表現手段は描画しかなく、画像を変更せずに行いたい意志伝達、つまり指す・なぞるといった意志伝達の手段は提供されていなかった。ところが、実際に紙や黒板などに書いた図を使用して複数の人間が意志交換を行う場合、該当する図に対する行動としては、文字・図形の追加・削除よりも指す・なぞるといった非描画行動の方がはるかに多いため、円滑な意志伝達ができないという問題があった。

【0004】本発明は上記従来の問題を解決するものであり、非描画意志伝達の可能な描画通信端末を提供することを目的とするものである。

【0005】

【課題を解決するための手段】本発明は上記目的を達成するために、座標・移動量などのポインティングデバイス情報を端末相互間で送受信する機構と、自らに接続されたポインティングデバイスに追従するカーソルと相手側端末から送信されたポインティングデバイス情報に追従するカーソルを各々独立に表示する機構を備えるようにしたものである。

【0006】

【作用】したがって本発明によれば、操作者側端末のポインティングデバイスに追従する操作者側端末上のカーソルと全く同じ動きをするカーソルを相手側端末上に表示できる。これにより、カーソルの動きそのものを双方

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向に伝達できるようになる。

【0007】

【実施例】図1は本発明の一実施例により表示装置上に表示された画像およびカーソルを示している。図1において、11は表示装置画面、12および13は描画ツールを含むメニュー、14は描画領域、15は操作者側端末のポインティングデバイスに追従するカーソル(以下、ローカルカーソルという)、16は相手側端末から送信されたポインティングデバイス情報に追従するカーソル(以下、リモートカーソルという)である。

【0008】図2は本発明の一実施例における描画通信端末の構成を示したものである。図2において、21は通信回線を通して相手描画通信端末装置との通話を制御する通信制御部、22は描画情報送受信部、23は描画部、24は表示装置、25はポインティングデバイス情報送受信部、26は音声送受信部、27は受話器であって音声の入出力および送受信を行う。28はカーソル制御部、29はポインティングデバイス管理部、30はポインティングデバイスである。

【0009】次に、上記実施例の動作を図1および図2を参照して説明する。ポインティングデバイス管理部29はポインティングデバイス30からの情報をデコードしてカーソル制御部28へ渡す。カーソル制御部28はポインティングデバイス30の情報からローカルカーソル15の位置を決定して表示装置24に表示すると同時に、ローカルカーソル15の位置情報をポインティング情報送受信部25によって相手側端末へ送出する。ローカルカーソル15が描画部23によって管理されるメニュー12、13に作用し文字・図形などの描画が発生した場合、表示装置24に対して描画が行われると同時に、その描画情報は描画情報送受信部22によって通信制御部21へ送られ、音声を含めたこれらのデータは通信制御部21にて統合されて通信回線を経て相手側端末へ送出される。

【0010】通信回線から受信したデータは通信制御部21によって描画情報、ポインティングデバイス情報、音声情報に分離される。描画部23は描画情報を描画情報送受信部22から取得し、文字・図形を表示装置24に表示する。これにより相手側端末で発生した描画受信側端末上に反映される。カーソル制御部28はポインティングデバイス情報送受信部25からリモートカーソル16の位置を取得し、リモートカーソル16を表示装置24に表示する。これにより相手側端末におけるカーソルの動きがリモートカーソルの動きとして受信側端末上に反映される。

【0011】

【発明の効果】本発明は上記実施例から明らかなように、音声による通話と同時に文字・図形情報を送受信し、通話者同士が同じ画像をリアルタイムに変更しながら情報交換を行うという双方向描画通信端末の基本機能に加え、画像を破壊せずにある部分を指す、なぞる、たどるといった日常的意志伝達が可能となる効果を有す

る。

【図面の簡単な説明】

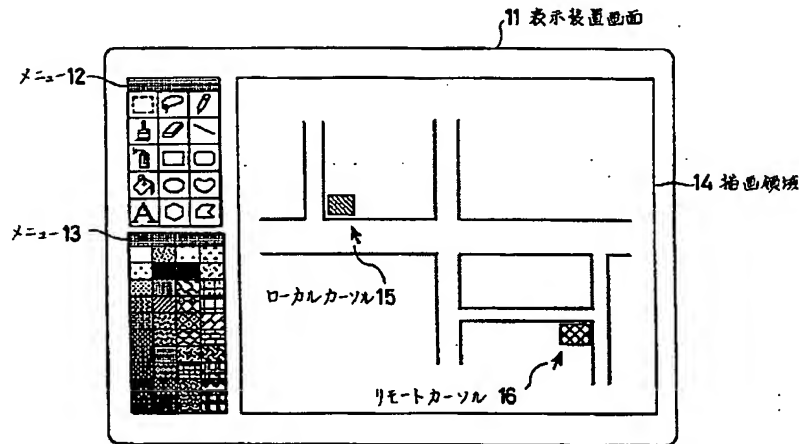
【図1】本発明の一実施例における描画通信端末装置の表示装置上のカーソル表示の例を示した図である。

【図2】本発明の一実施例における描画通信端末装置のブロック構成図である。

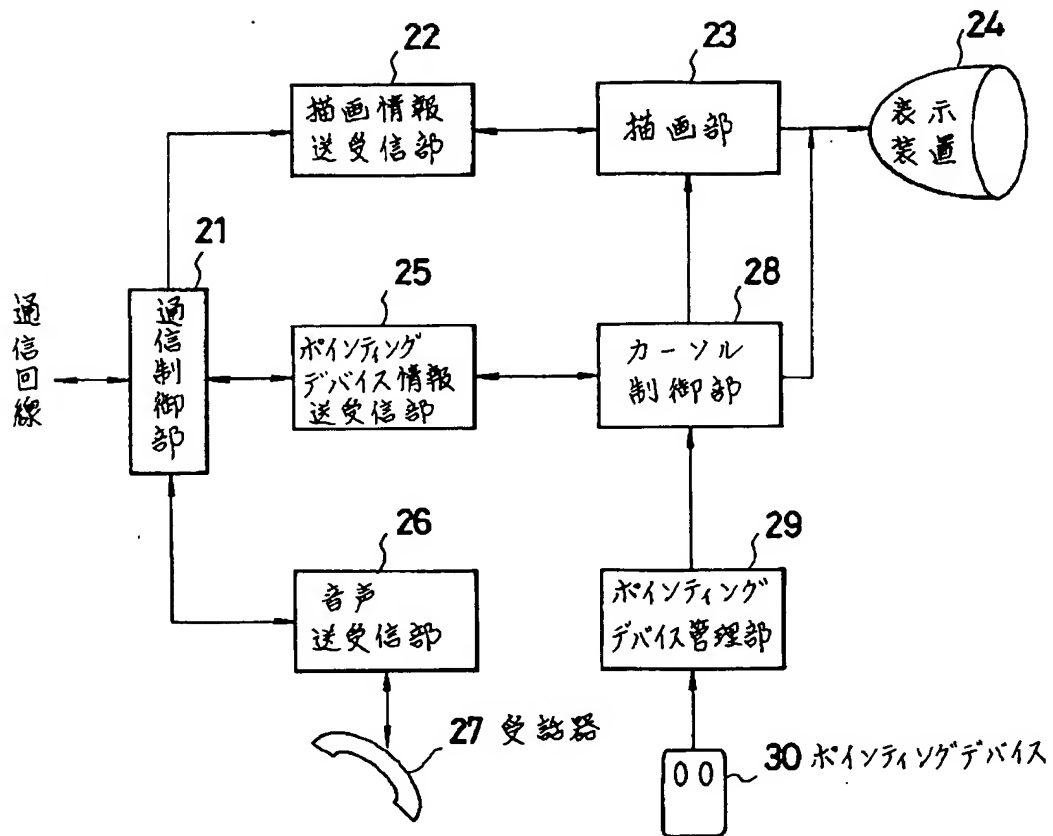
【符号の説明】

11…表示装置画面、 12, 13…メニュー、 14…描画領域、 15…ローカルカーソル、 16…リモートカーソル、 21…通信制御部、 22…描画情報送受信部、 23…描画部、 24…表示装置、 25…ポインティングデバイス情報送受信部、 26…音声送受信部、 27…受話器、 28…カーソル制御部、 29…ポインティングデバイス管理部、 30…ポインティングデバイス。

【図1】



【図2】



PAT-NO: JP405083413A
DOCUMENT-IDENTIFIER: JP 05083413 A
TITLE: PLOTTING COMMUNICATION TERMINAL EQUIPMENT
PUBN-DATE: April 2, 1993

INVENTOR-INFORMATION:
NAME
TANAKA, TOSHIHIDE

ASSIGNEE-INFORMATION:
NAME COUNTRY
MATSUSHITA ELECTRIC IND CO LTD N/A

APPL-NO: JP03000194
APPL-DATE: January 7, 1991

INT-CL (IPC): H04M011/00, G06F003/153

US-CL-CURRENT: 379/100.15

ABSTRACT:

PURPOSE: To execute such a non-plotting will transfer as indicating, tracing, etc., by providing a mechanism for transmitting and receiving pointing device information between each terminal, and displaying independently a cursor for following its information, respectively.

CONSTITUTION: Information from a pointing device 30 is decoded by a managing part 29 and sent to a cursor control part 28, and a position of a local cursor 15 is determined and displayed on a device 24. Simultaneously, position information is sent out to the other party side terminal by an information transmitting/ receiving part 25. In such a state, when plotting of a character

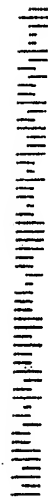
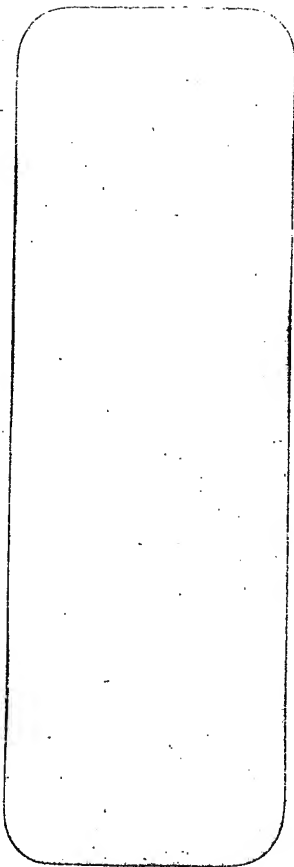
and a graphic is generated, it is sent out together with a voice to the other party side terminal from a communication control part 21 through a plotting information transmitting/receiving part 22. On the other hand, in the other party side terminal, receive data is separated into plotting information, pointing device information and voice information by the communication control part 21, and thereafter, the plotting information is displayed on the display part 24, and also, a position of a cursor 16 is displayed by a cursor control part 28. In such a way, such a will transfer as each talker indicates, traces, etc., the same image in real time can be executed.

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